

CLAIMS

1. A printing condition setting method comprising:

5 a required print sheets number confirming step of confirming a required print sheets number in original images;

a print output sheets number recognizing step of recognizing a print output sheets number in output sheets;

10 a calculating step of calculating a number of the original images that should be printed on each output sheet in printing the original images of the required print sheets number on the output sheets so as not to exceed the print output sheets number; and

15 a printing condition setting step of setting one or more printing conditions, each of which allows the original images of the required print sheets number to be printed on the output sheets so as not to exceed the printing output sheets number, in accordance with a calculation result obtained in the calculating step.

20 2. The method as set forth in claim 1, wherein, in the print output sheets recognizing step, the print output sheets number that has been set and inputted by a user is recognized.

25 3. The method as set forth in claim 1, wherein, in the

print output sheets number recognizing step, a number of the output sheets remaining in sheet feeding means of the image forming device is confirmed, and thus confirmed number of the output sheets remaining in the sheet feeding means is  
5 recognized as the print output sheets number.

4. The method as set forth in claim 1, wherein, in the printing condition setting step, when there are a plurality of the printing conditions that can be selected, the printing  
10 conditions are displayed so that the user can make a selection from the printing conditions so as to input thus selected one.

5. The method as set forth in claim 1, wherein, in the  
15 printing condition setting step, when there are a plurality of the printing conditions that can be selected, one of the printing conditions is set in accordance with a priority condition that has been set in advance.

20 6. The method as set forth in claim 1, wherein, in the printing condition setting step, when there is no printing condition which allows the original images of the required print sheets number to be printed on the output sheets so as not to exceed the print output sheets number, one of the  
25 printing conditions which minimizes the print output sheets

number is displayed so that the user can determine whether or not to cancel a printing operation so as to input the determination.

5           7. The method as set forth in claim 1, wherein, when a stapling process is selected in the image forming device, a maximum number of the output sheets stapled in performing the stapling process is set as the print output sheets number set in the print output sheets number recognizing step.

10

8. A printing condition setting method comprising:

a required print sheets number confirming step of confirming a required print sheets number in original images;

15           a print output sheets number recognizing step of recognizing a print output sheets number in output sheets;

an output copies number recognizing step of recognizing an output copies number;

20           a calculating step of calculating a number of the original images, that should be printed on each output sheet in printing the original images of the required print sheets number on the output sheets so as not to exceed the print output sheets number, in consideration for the output copies number; and

25           a printing condition setting step of setting one or more printing conditions, each of which allows the original images

of the required print sheets number to be printed on the output sheets so as not to exceed the print output sheets number, in accordance with a calculation result obtained in the calculating step.

5

9. The method as set forth in claim 8, wherein, in the printing condition setting step, when there are a plurality of the printing conditions that can be selected, the printing conditions are displayed so that the user can make a selection from the printing conditions so as to input thus selected one.

10

10. The method as set forth in claim 8, wherein, in the printing condition setting step, when there are a plurality of the printing conditions that can be selected, one of the printing conditions is set in accordance with a priority condition that has been set in advance.

15

11. The method as set forth in claim 8, wherein, in the printing condition setting step, when there is no printing condition which allows the original images of the required print sheets number to be printed on the output sheets so as not to exceed the printing output sheets number, one of the printing conditions which minimizes the print output sheets number is displayed so that the user can determine whether

20

25

or not to cancel a printing operation so as to input the determination.

12. A printing condition setting method comprising:

5       a total images number calculating step of calculating a total number of unit images, corresponding to image data which should be printed on each output sheet, in accordance with at least original images that have been inputted;

10       a printing condition setting step of selecting a distribution number which is a number of the unit images printed on each output sheet so as to set a printing condition; and

15       an allowable amount detecting step of detecting a condition concerning an allowable amount of output sheets which are allowed to be outputted in a single printing operation performed by an image forming device, wherein

20       in the printing condition setting step, the printing condition is set in accordance with at least (i) the total number of the unit images that has been calculated and (ii) the allowable amount that has been detected.

13. The method as set forth in claim 12, wherein, in the total images number calculating step, the original images are temporarily stored in storage means.

14. The method as set forth in claim 12 further comprising a print copies number setting step of setting a print copies number of the original images, wherein

5 in the total images number calculating step, the total number of the unit images is calculated in accordance with at least (i) the original images that have been inputted and (ii) the print copies number that has been set.

15. The method as set forth in claim 12, wherein

10 in the allowable amount detecting step, at least any one of (i) an amount of the output sheets remaining in sheet feeding means of an image forming device, (ii) an amount of the output sheets that can be delivered by delivery means which delivers the output sheet that have been printed, and  
15 (iii) an amount of the output sheets that can be post-processed by post-processing means which post-processes the output sheets that have been printed, is detected as the condition concerning the allowable amount.

20 16. The method as set forth in claim 15, wherein the post-processing means includes any one of (i) stapling means for performing a stapling process, (ii) punching means for performing a punching process, and (iii) sorting means for performing a sorting process.

17. The method as set forth in claim 15, wherein, when the output sheets to be printed are standardized output sheets that have been uniformly standardized, the amount of the output sheet than can be post-processed is fixed in accordance with a type of the post-processing means.

18. The method as set forth in claim 12 further comprising a limited output sheets number setting step of setting a limited output sheets number in printing the original images, wherein

in the printing condition setting step, the printing condition is set in accordance with at least (i) the total number of the unit images that has been calculated, (ii) the allowable amount that has been detected, and (iii) the limited output sheets number that has been set.

19. The method as set forth in claim 12, wherein, in the printing condition setting step, a plurality of formation layouts are prepared set so that the unit images are disposed in each output sheet in accordance with the distribution number of the unit images that has been selected.

20. The method as set forth in claim 19, wherein, in the printing condition setting step, combinations each of which is constituted of (i) the distribution number of the unit images

and (ii) each of the formation layouts are recognized as output modes, and the printing condition is set by selecting one from the output modes.

5           21. The method as set forth in claim 12, wherein, in the printing condition setting step, whether or not it is possible to carry out a printing operation in accordance with the printing condition that has been set is determined, and when  
10 it is impossible to carry out the printing operation in accordance with the printing condition that has been set, the printing condition is carried out in accordance with a predetermined printing condition.

15           22. The method as set forth in claim 12 further comprising a desired condition inputting step of inputting a printing condition desired by the user, wherein

in the printing condition setting step, the printing condition desired by the user is preferentially set.

20           23. The method as set forth in claim 12 further comprising a printing condition confirming step of (i) causing display means to display the printing condition that has been set in the printing condition setting step and (ii) performing an inputting operation so as to cause inputting means to  
25 change the printing condition to another printing condition.



24. An image forming device, setting a printing condition by using a printing condition setting method, wherein the printing condition setting method includes:

5           a required print sheets number confirming step of confirming a required print sheets number in original images;

          a print output sheets number recognizing step of recognizing a print output sheets number in output sheets;

10           a calculating step of calculating a number of the original images that should be printed on each output sheet in printing the original images of the required print sheets number on the output sheets so as not to exceed the print output sheets number; and

15           a printing condition setting step of setting one or more printing conditions, each of which allows the original images of the required printing sheets number to be printed on the output sheets so as not to exceed the print output sheets number, in accordance with a calculation result obtained in the calculating step.

20           25. An image forming device, setting a printing condition by using a printing condition setting method, wherein the printing condition setting method includes:

25           a required print sheets number confirming step of confirming a required print sheets number in original images;

a print output sheets number recognizing step of recognizing a print output sheets number in output sheets;

an output copies number recognizing step of recognizing an output copies number;

5 a calculating step of calculating a number of the original images, that should be printed on each output sheet in printing the original images of the required print sheets number on the output sheets so as not to exceed the print output sheets number, in consideration for the output copies  
10 number; and

a printing condition setting step of setting one or more printing conditions, each of which allows the original images of the required print sheets number to be printed on the output sheets so as not to exceed the print output sheets  
15 number, in accordance with a calculation result obtained in the calculating step.

26. An image forming device, setting a printing condition by using a printing condition setting method, wherein the  
20 printing condition setting method includes:

a total images number calculating step of calculating a total number of unit images, corresponding to image data which should be printed on each output sheet, in accordance with at least original images that have been inputted;

25 a printing condition setting step of selecting a

distribution number which is a number of the unit images printed on each output sheet so as to set a printing condition; and

5        an allowable amount detecting step of detecting a condition concerning an allowable amount of output sheets which are allowed to be outputted in a single printing operation performed by an image forming device, wherein

10        in the printing condition setting step, the printing condition is set in accordance with at least (i) the total number of the unit images that has been calculated and (ii) the allowable amount that has been detected.